Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road, Waterford, CT 06385

Dominion®

JAN 2 7 2011

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Serial No. 11-005
MPS Lic/LES R0
Docket No. 50-336
License No. DPR-65

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 2
LICENSEE EVENT REPORT 2010-003-00
MILLSTONE POWER STATION UNIT 2 REACTOR TRIP ON LOW CONDENSER VACUUM

This letter forwards Licensee Event Report (LER) 2010-003-00 documenting an event that occurred at Millstone Power Station Unit 2, on November 28, 2010. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B).

If you have any questions or require additional information, please contact Mr. William D. Bartron at (860) 444-4301.

Sincerely,

A. J. Jordan
Site Vice President – Millstone

Attachments: 1

Commitments made in this letter: None

IE22
NRR

cc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

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Project Manager
U.S. Nuclear Regulatory Commission
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NRC Senior Resident Inspector
Millstone Power Station

ATTACHMENT

LICENSEE EVENT REPORT 2010-003-00

MILLSTONE POWER STATION UNIT 2
DOMINION NUCLEAR CONNECTICUT, INC.

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
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4. TITLE

Reactor Trip on Low Condenser Vacuum

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
11	28	2010	2010	– 003 –	00	01	27	2011	FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE

1

10. POWER LEVEL

100

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*

☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☒ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ OTHER
☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
William D. Bartron, Nuclear Station Licensing	860-444-4301

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO

15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On November 28, 2010, at 1515, Millstone Power Station Unit 2's (MPS2) reactor automatically tripped from 100% power MODE 1. Prior to the event, MPS2 was establishing conditions to perform a backwash of the "B" condenser [COND] waterbox. Operators pressed the stop pushbutton for the "B" circulating water (CW) pump [P] and were closing the "A" CW pump's water box outlet valve (2-CW-11A) [V] per established operating procedure OP-2325D when the "A" CW pump automatically ramped off. Upon loss of the second pump in the condenser, condenser pressure increased to the low condenser vacuum trip set point, causing an automatic turbine generator trip and a reactor trip.

This event is reportable per 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in a manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B).

The cause of the event was an organizational failure to properly develop and train on the procedure needed to conduct backwashing operations using Variable Frequency Driven (VFD) CW pumps.

Corrective actions to prevent recurrence being implemented will ensure proper development and training on procedures are made during plant modifications.

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NARRATIVE

1. Event Description

On November 28, 2010, at 1515, Millstone Power Station Unit 2's (MPS2) reactor automatically tripped from 100% power MODE 1. Prior to the event, MPS2 was establishing conditions to perform a backwash of the "B" condenser [COND] waterbox. Operators pressed the stop pushbutton for the "B" circulating water (CW) pump [P] and were closing the "A" CW pump's water box outlet valve (2-CW-11A) [V] per established operating procedure OP-2325D when the "A" CW pump automatically ramped off. Upon loss of the second pump in the condenser, condenser pressure increased to the low condenser vacuum trip set point, causing an automatic turbine generator trip and a reactor trip.

The CW pumps' operation had changed due to plant modifications which installed Variable Frequency Drives (VFDs) for these pumps at Millstone Station. In accordance with the original systems' design, when the control logic sensed that the "A" CW pump's outlet valve was closed with the "B" CW pump still running, it caused the "A" CW pump to automatically shut down because the system detected that no flow path was available. The VFD modification changed the CW pump operation in that the pumps ramped off instead of tripping off when the operator stopped the pump in VFD Mode. This new configuration created a delay in completing the logic for pump shutdown.

2. Cause

The cause of the event was an organizational failure to properly develop and train on the procedure needed to conduct backwashing operations using Variable Frequency Driven (VFD) CW pumps.

3. Assessment of Safety Consequences

The operating crew responded to the reactor trip by completing EOP 2525, Standard Post Trip Actions, and entering EOP 2526 Reactor Trip Recovery. The auxiliary feedwater system started in response to low steam generator level as designed.

All control rods inserted on the reactor trip. With the "C" and "D" CW pumps still running, condenser vacuum remained adequate for operation of the condenser dump valves following the reactor trip. Both main and auxiliary feedwater provided makeup to the steam generators.

Based on the above discussion, there were no safety consequences for the event.

This event is reportable per 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in a manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B). Actuations of the reactor protection system and the auxiliary feedwater system are reportable under this paragraph.

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NARRATIVE

4. Corrective Action

OP-2325D was revised prior to MPS2 restart to provide additional directions to operators about circulating water pump operations during backwashing. All other VFD procedures on MPS2 and MPS3 were reviewed and found to contain adequate procedure guidance or corrective actions were established to correct the procedures.

Corrective actions to prevent recurrence being implemented will ensure proper development and training on procedures are made during plant modifications.

5. Previous Occurrences

No similar occurrences were found at Millstone Station where plant trips occurred caused by failure to properly implement a procedure due to design changes within the last 3 years.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].